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Relevance scale ☐ ☐ ☐ ☐ ☐**1** [Oracle media server: providing consumer based interactive access to multimedia data](#)

Andrew Laursen, Jeffrey Olkin, Mark Porter

May 1994 **ACM SIGMOD Record , Proceedings of the 1994 ACM SIGMOD international conference on Management of data**, Volume 23 Issue 2Full text available: [pdf\(1.05 MB\)](#)Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

Currently, most data accessed on large servers is structured data stored in traditional databases. Networks are LAN based and clients range from simple terminals to powerful workstations. The user is corporate and the application developer is an MIS professional. With the introduction of broadband communications to the home and better than 100-to-1 compression techniques, a new form of network-based computing is emerging. Structured data is still important, but the bulk of data b ...

2 [Posters and Short Papers: Content-sensitive video streaming over low bitrate and lossy wireless network](#)

Kun Tan, Richard Ribier, Shih-Ping Liou

October 2001 **Proceedings of the ninth ACM international conference on Multimedia**Full text available: [pdf\(1.04 MB\)](#)Additional Information: [full citation](#), [references](#), [index terms](#)**3** [Streaming services: Streaming media middleware is more than streaming media](#)

Lawrence A. Rowe

October 2001 **Proceedings of the 2001 international workshop on Multimedia middleware**Full text available: [pdf\(607.36 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#)

Middleware for streaming media requires services other than media capture, encoding/decoding, network transmission, and presentation. Specifically most streaming media applications are distributed applications so they require the services being developed to support client/server and peer-to-peer applications. They also require multicast application services such as soft-state announce/listen protocols, reliable multicast protocols, and publish/subscribe multicast protocols. Some applications req ...

4 [Scalable on-demand media streaming with packet loss recovery](#)


Anirban Mahanti, Derek L. Eager, Mary K. Vernon, David J. Sundaram-Stukel


April 2003 **IEEE/ACM Transactions on Networking (TON)**, Volume 11 Issue 2Full text available: [pdf\(680.99 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Previous scalable on-demand streaming protocols do not allow clients to recover from


packet loss. This paper develops new protocols that: 1) have a tunably short latency for the client to begin playing the media; 2) allow heterogeneous clients to recover lost packets without jitter as long as each client's *cumulative* loss rate is within a tunable threshold; and 3) assume a tunable upper bound on the transmission rate to each client that can be as small as a fraction (e.g., 25%) greater than ...


Keywords: multicast, packet loss recovery, performance evaluation, periodic broadcast, scalable protocols, streaming media, video-on-demand

- 5 [Scheduling optimization for resource-intensive Web requests on server clusters](#) 
Huican Zhu, Ben Smith, Tao Yang
June 1999 **Proceedings of the eleventh annual ACM symposium on Parallel algorithms and architectures**

Full text available:  [pdf\(1.19 MB\)](#)


Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

- 6 [Streaming Media](#) 
Frank LaMonica
January 2001 **Linux Journal**


Full text available:  [html\(24.84 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

LaMonica describes the hardware and software technology used on the server side of the streaming process.


- 7 [A digital on-demand video service supporting content-based queries](#) 
T. D. C. Little, G. Ahanger, R. J. Folz, J. F. Gibbon, F. W. Reeve, D. H. Schelleng, D. Venkatesh
September 1993 **Proceedings of the first ACM international conference on Multimedia**

Full text available:  [pdf\(177.72 KB\)](#)

 [ps\(4.19 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: applications, content-based retrieval, multimedia databases, temporal data management, video-on-demand


- 8 [Video adaptation: RITA: receiver initiated *just-in-time* tree adaptation for rich media distribution](#) 
Zhichen Xu, Chunqiang Tang, Sujata Banerjee, Sung-Ju Lee
June 2003 **Proceedings of the 13th international workshop on Network and operating systems support for digital audio and video**


Full text available:  [pdf\(276.91 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Application-level multicast networks overlaid on unicast IP networks are increasingly gaining in importance. While there have been several proposals for overlay multicast networks, very few of them focus on the stringent requirements of real-time applications such as streaming media. We propose RITA (Receiver Initiated Timely Adaptation) framework for an efficient overlay multicast infrastructure. RITA is based on a combination of landmark clustering and RTT measurements, and is particularly suitable for ...

Keywords: DHT, multicast, overlay networks, streaming media

- 9 [Copyrights and access-rights: How DRM-based content delivery systems disrupt expectations of "personal use"](#) 
Deirdre K. Mulligan, John Han, Aaron J. Burstein
October 2003 **Proceedings of the 2003 ACM workshop on Digital rights management**


Full text available:  [pdf\(416.68 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

We set out to examine whether current, DRM-based online offerings of music and movies accord with consumers' current expectations regarding the personal use of copyrighted works by studying the behavior of six music, and two film online distribution services. We find that, for the most part, the services examined do not accord with expectations of personal use. The DRM-based services studied restrict personal use in a manner inconsistent with the norms and expectations governing the purchase and ...

Keywords: access control, content distribution, copyright, digital rights management, fair use, personal use, privacy

10 [The state of the art in locally distributed Web-server systems](#)

Valeria Cardellini, Emiliano Casalicchio, Michele Colajanni, Philip S. Yu
June 2002 **ACM Computing Surveys (CSUR)**, Volume 34 Issue 2

Full text available:  [pdf\(1.41 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The overall increase in traffic on the World Wide Web is augmenting user-perceived response times from popular Web sites, especially in conjunction with special events. System platforms that do not replicate information content cannot provide the needed scalability to handle large traffic volumes and to match rapid and dramatic changes in the number of clients. The need to improve the performance of Web-based services has produced a variety of novel content delivery architectures. This article w ...

Keywords: Client/server, World Wide Web, cluster-based architectures, dispatching algorithms, distributed systems, load balancing, routing mechanisms

11 [Poster session and reception: Annotations as multiple perspectives of video content](#)

Miguel Costa, Nuno Correia, Nuno Guimarães
December 2002 **Proceedings of the tenth ACM international conference on Multimedia**


Full text available:  [pdf\(140.09 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper describes a video annotation tool based on a new and flexible model, that gives several perspectives over the same video content. The model was designed in a way that allows having multiple views over the same video data, enabling users with different requirements to have the most appropriate interface. These views, video-lenses, highlight a specific aspect of the video content that is being annotated. Annotations are made using a timeline based interface with multiple tracks, where e ...

Keywords: MPEG-7, authoring paradigms, timeline model, video annotation, video-lens

12 [Error spreading: a perception-driven approach to handling error in continuous media streaming](#)

Srivatsan Varadarajan, Hung Q. Ngo, Jaideep Srivastava
February 2002 **IEEE/ACM Transactions on Networking (TON)**, Volume 10 Issue 1

Full text available:  [pdf\(377.04 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


With the growing popularity of the Internet, there is increasing interest in using it for audio and video transmission. Perceptual studies of audio and video viewing have shown that viewers find bursty losses, mostly caused by congestion, to be the most annoying disturbance, and hence these are critical issues to be addressed for continuous media streaming applications. Classical error handling techniques have mostly been geared toward ensuring that the transmission is correct, with no attention ...

Keywords: Bursty error, error spreading, multimedia

13 Streams, structures, spaces, scenarios, societies (5s): A formal model for digital libraries

Marcos André Gonçalves, Edward A. Fox, Layne T. Watson, Neill A. Kipp

April 2004 **ACM Transactions on Information Systems (TOIS)**, Volume 22 Issue 2

Full text available:  [pdf\(316.85 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


Digital libraries (DLs) are complex information systems and therefore demand formal foundations lest development efforts diverge and interoperability suffers. In this article, we propose the fundamental abstractions of Streams, Structures, Spaces, Scenarios, and Societies (5S), which allow us to define digital libraries rigorously and usefully. Streams are sequences of arbitrary items used to describe both static and dynamic (e.g., video) content. Structures can be viewed as labeled directed gra ...

Keywords: applications., definitions, foundations, taxonomy

14 Managing routing tables for URL routers in content distribution networks

Zornitza Genova Prodanoff, Kenneth J. Christensen

May 2004 **International Journal of Network Management**, Volume 14 Issue 3


Full text available:  [pdf\(337.00 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Large-scale content distribution networks (CDNs) can be built using URL routers to redirect client HTTP requests to the nearest content source. URL routers employ very large routing tables. To improve the manageability of CDNs, we propose to use URL signatures to reduce the size of routing tables and aggressive hashing to speed-up routing look-ups.

15 Stream query processing I: Distributed top-k monitoring

Brian Babcock, Chris Olston

June 2003 **Proceedings of the 2003 ACM SIGMOD international conference on Management of data**


Full text available:  [pdf\(372.08 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The querying and analysis of data streams has been a topic of much recent interest, motivated by applications from the fields of networking, web usage analysis, sensor instrumentation, telecommunications, and others. Many of these applications involve monitoring answers to continuous queries over data streams produced at physically distributed locations, and most previous approaches require streams to be transmitted to a single location for centralized processing. Unfortunately, the continual tr ...

16 Streaming 2: ReMDoR: remote multimedia document retrieval over partial order transport

Phillip T. Conrad, Armando Caro, Paul Amer

October 2001 **Proceedings of the ninth ACM international conference on Multimedia**

Full text available:  [pdf\(1.41 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents results from performance experiments that demonstrate and quantify performance improvements when a PO/R transport service is used instead of an ordered/reliable service (O/R e.g., TCP) or an unordered/unreliable service (e.g. UDP). We first describe the *Remote Multimedia Document Retrieval system (ReMDoR)*, an experimental application developed by the authors to evaluate the performance of remote document retrieval over a variety of transport protocols. We then provide ...

Keywords: multimedia, partial order, transport protocols

17 Plenary Panel: Is streaming media becoming mainstream?

Savitha Srinivasan, Dulce Poncelon, Dick Bulterman, Edward Delp, Alexandros Eleftheriadis, Pablo Fernicola, Rob Lanphier, See-Mong Tan

October 2001 **Proceedings of the ninth ACM international conference on Multimedia**Full text available:  [pdf\(84.65 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)**18** CMIFed: a transportable hypermedia authoring system

Lynda Hardman, Guido van Rossum, Jack Jansen, Sjoerd Mullender

October 1994 **Proceedings of the second ACM international conference on Multimedia**Full text available:  [pdf\(1.93 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**19** Measuring and characterizing end-to-end Internet service performance

Ludmila Cherkasova, Yun Fu, Wenting Tang, Amin Vahdat


November 2003 **ACM Transactions on Internet Technology (TOIT)**, Volume 3 Issue 4Full text available:  [pdf\(1.46 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Fundamental to the design of reliable, high-performance network services is an understanding of the performance characteristics of the service as perceived by the client population as a whole. Understanding and measuring such end-to-end service performance is a challenging task. Current techniques include periodic sampling of service characteristics from strategic locations in the network and instrumenting Web pages with code that reports client-perceived latency back to a performance server. Li ...

Keywords: End-to-end service performance, QoS, network packet traces, passive monitoring, reconstruction of web page composition, web site performance

20 Session 10: meeting support: Distributed meetings: a meeting capture and broadcasting system

Ross Cutler, Yong Rui, Anoop Gupta, JJ Cadiz, Ivan Tashev, Li-wei He, Alex Colburn, Zhengyou Zhang, Zicheng Liu, Steve Silverberg

December 2002 **Proceedings of the tenth ACM international conference on Multimedia**Full text available:  [pdf\(509.26 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


The common meeting is an integral part of everyday life for most workgroups. However, due to travel, time, or other constraints, people are often not able to attend all the meetings they need to. Teleconferencing and recording of meetings can address this problem. In this paper we describe a system that provides these features, as well as a user study evaluation of the system. The system uses a variety of capture devices (a novel 360° camera, a whiteboard camera, an overview camera, and a mi ...

Keywords: 360 degree video, meeting capture, meeting indexing, microphone array, teleconferencing

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